

# CALIFORNIA. ~~STATE~~ BOARD OF HEALTH.

## MONTHLY BULLETIN.

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### STATE BOARD OF HEALTH.

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### STATE HYGIENIC LABORATORY.

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### NOTICE TO REGISTRARS.

*Transmit Reports Promptly.*—Since the tabulations for the biennial report of the State Board of Health must be begun at once, Local Registrars are urgently requested to transmit to the State Registrar their reports of vital statistics to June 30th as early as possible in July, and certainly within the time prescribed by law.

### VITAL STATISTICS FOR MAY.

*Summary.*—For May there were reported 1,712 living births, 2,375 deaths, exclusive of stillbirths, and 1,739 marriages, which, for an estimated State population of 1,882,483, give the following annual rates: Births, 10.9; deaths, 15.1, and marriages, 11.1, per 1,000 inhabitants.

As usual, tuberculosis was the leading cause of death, with diseases of the circulatory and nervous systems next in order, the proportion of deaths caused by pneumonia and other diseases of the respiratory system being less in May than in previous months.

The most fatal epidemic diseases in May were measles and typhoid fever, followed by diphtheria and croup, whooping-cough, and influenza.

*Causes of Death.*—The following table shows for the State in May the number and proportion of deaths due to certain important causes:

Cause of Death.	Number.	Total Deaths.	Proportion per 1,000
ALL CAUSES .....	2,375	1,000.0	
Typhoid fever.....	40	16.8	
Malarial fever.....	4	1.7	
Smallpox .....	3	1.2	
Measles .....	41	17.3	
Scarlet fever.....	6	2.5	
Whooping-cough .....	10	4.2	
Diphtheria and croup.....	22	9.3	
Influenza .....	10	4.2	
Other epidemic diseases .....	18	7.6	
Tuberculosis of lungs .....	334	140.6	
Tuberculosis of other organs.....	56	23.6	
Cancer .....	118	49.7	
Other general diseases.....	74	31.1	
Meningitis .....	35	14.7	
Other diseases of nervous system.....	194	81.7	
Diseases of circulatory system.....	317	133.5	
Pneumonia and broncho-pneumonia.....	170	71.6	
Other diseases of respiratory system.....	56	23.6	
Diarrhea and enteritis, under 2 years.....	86	36.2	
Diarrhea and enteritis, 2 years and over.....	37	15.6	
Other diseases of digestive system.....	122	51.4	
Bright's disease and nephritis.....	142	59.8	
Childbirth .....	20	8.4	
Early infancy.....	77	32.4	
Suicide .....	37	15.6	
Other violence.....	204	85.9	
All other causes.....	142	59.8	

Tuberculosis, as usual, was the leading cause of death, altogether 390 deaths, or 16.4 per cent of all, being due to tuberculosis of the lungs and other organs. Next in order are diseases of the circulatory and nervous systems, the proportion for pneumonia and other diseases of the respiratory system having fallen off with the coming of spring. The 204 deaths from violence, other than suicide, include 48 late reports of deaths resulting from the earthquake and fire in April.

The principal epidemic diseases in May were: Measles, 41; typhoid fever, 40; diphtheria and croup, 22, and measles and influenza, each 10.

TO BOARDS OF TRUSTEES, BOARDS OF HEALTH, AND  
HEALTH OFFICERS.

We wish to call your attention to Section 3061 of the Political Code, which has long been the law of the State:

SEC. 3061. It shall be the duty of the board of trustees, council, or other corresponding board of every incorporated town and city of this State, to establish, by ordinance, a board of health for such town or city, to consist of five persons, one at least of whom shall be a practicing physician and a graduate of some reputable school of medicine, and one, if practicable, a civil engineer. The members of the board shall hold their office at the pleasure of the appointing power. Every local board of health established in this State must:

*First*—Supervise all matters pertaining to the sanitary conditions of their town or city, and make such rules and regulations relative thereto as are necessary and proper, and not contrary to law.

*Second*—Report to the secretary of the State Board of Health, at Sacramento, at such times as the State Board of Health may require:

- (a) The sanitary condition of their locality;
- (b) The number of deaths with the cause of each, as near as can be ascertained, within their jurisdiction, during the preceding month;
- (c) The presence of epidemic or other dangerous, contagious or infectious disease, and such other matters within their knowledge or jurisdiction as the State board may require.

If there is any incorporated town which has no Board of Health, the Trustees or Council are violating the law by not establishing one. They are also depriving their constituents of the benefit of an important branch of government. Establish one at once.

Particular attention is called to the second duty of the local Board of Health or its executive officer, namely, *reports to the State Board of Health*. It is a violation of the law to omit making these reports. It also deprives this office of much necessary information. Blanks will be furnished on application.

Many health officers have never reported to this office, so are not on the mailing list. It is one of the requirements that all health officers report and all changes in the local boards be noted. Many who are on the mailing list and receive the Bulletin each month, fail to regard this second duty, imposed upon them. Blanks were sent to all health officers who were on the list, when they were issued. The names of many have since been gathered from newspapers and they may not have the blanks, but need only write and ask for them.

We want from each health officer a careful report of the health conditions of the community. It is not expected that each officer can always give the *exact* number of cases of a particular disease that exists in his jurisdiction, but he can closely approximate it.

It is the duty of physicians to report all infectious or communicable diseases to the health officer, and if he will have postal cards printed with a list of such diseases and distribute them to the doctors and insist that they be filled and returned, an almost absolute record would be kept. We strongly advise this, and many local health officers are doing it. These reports can be easily compiled and sent to the State office, where a complete record will be kept. We could then study and watch the spread of disease, and do much to check it. Some health officers are doing excellent work in these reports, and to them we extend our thanks. If no diseases occur, send the card just the same; it shows us you are on the map and attending to business. The portion reserved for "remarks" should always be filled. Every one has something valuable to say, and we get some good suggestions in this way.

#### BIRTH REPORTS.

The law requiring the registration of births is not being obeyed in some parts of the State as carefully as it should be. The reasons of this are three: A few physicians think they are being imposed upon, and that the State has no right to ask this service of them. A few more seem to be totally ignorant of the law, although copies of it have been sent to them. A greater number, while knowing and acknowledging the justice of the law, neglect to comply with its provisions.

To all, we wish to call attention to the following from Dr. Arthur R. Reynolds, Health Commissioner of Chicago, showing the necessity for these statistics:

"There is hardly a relation in life, from the cradle to the grave, in which the evidence furnished by an accurate registration of births may not prove to be of the greatest value, as, for example, in the matter of descent, in the relations of guardians and wards, in the disabilities of minors; in the administration of estates, the settlement of insurance and pensions, the requirements of foreign countries concerning resi-

dence, marriage and legacies; in marriage in our own country, in voting and in jury and militia service, in the right to admission and practice in the professions and to many public offices, in the enforcement of laws relating to education and to child labor, as well as to various matters in the Criminal Code—the irresponsibility of children under ten years of age for crime and misdemeanor, the determination of the age of consent, etc.”

While our law may not be perfect, and experience may show the way to a better one, it is the one in this country that has produced the best results. Until we get a better one, the physicians should loyally support it. By keeping a supply of blanks in their obstetric cases, they can, without loss of time, fill them out. The child has a right to this registration, and the physician's duty to it is not done until the certificate is filed.

The Monthly Bulletin of the Indiana State Board of Health quotes Dr. Frank Billings as saying in his presidential address before the American Medical Association:

“The physician's duties are not all performed until he has duly made out such certificates of births, deaths, and contagious diseases which he has attended. His duties to his country and the laws, his duty to the profession to which he belongs and to his patient all demand of the physician that he make full reports.”

#### ASSOCIATIONS OF HEALTH OFFICERS.

A short time ago the State Board of Health invited the health officers of Kern, Kings, Tulare, Fresno, Madera, Merced, Mariposa, Stanislaus, San Joaquin, Tuolumne, Calaveras, and Amador counties to meet in Fresno, on June 16th, for the purpose of organization.

In response to that invitation, health officers from Kern, Kings, Fresno, Madera, Merced, Mariposa, and San Joaquin counties met and organized “The Central California Health Officers' Association.” Dr. W. S. Fowler of Bakersfield was elected president, Dr. Mary R. Butin of Madera, vice-president; Dr. O. W. Steinwand of Selma, secretary, and Dr. G. L. Long of Fresno, treasurer.

“The object of this association is to unite all the health officers of Central California in a more perfect and systematic organization; to act as an adjunct to the State Board of Health; to carry out and enforce the health laws of the State of California; to endeavor to bring about a better understanding of the same with the general public; and to secure and promote such influence, as health officers, as can only result from a systematic and uniform organization.”

It was decided to hold semi-annual meetings, and the next one will be held in Stockton in December.

It is very much to be regretted that the health officers of the remaining counties—Tulare, Tuolumne, Stanislaus, Calaveras, and Amador—were not able to be present to join in the discussions and to impart to others their valuable experience. They are earnestly invited to attend the December meeting at Stockton.

Two papers were read, the first by Dr. Mary R. Butin of Madera, on “The Model Sanitary Municipality,” the other by Dr. W. S. Fowler of Bakersfield, on “Disinfection.” Both papers were full of good things, well said, and brought out extended and interesting discussion.

It is these discussions entered into by all, and where each one feels free to express his belief, founded on experience, that make these associations particularly interesting and valuable. We all learn by experience, but the field is so large, a good deal must be learned from the experience of others.

The influence of the association is bound to be great on the health conditions of the district. There will be strength of organization in fighting unsanitary conditions and disease, where formerly it was individual effort. It will bring the position of health officer more prominently before the public, and by showing its use and beneficial results lead to a more hearty coöperation and recognition. From the earnestness and ability displayed in the first meeting we predict a successful future for The Central California Health Officers' Association.

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Why not have similar associations in several other sections of the State? Southern California could have one to its great good. There are many health officers there who would profit much by such an association, and the whole section would reap the benefit. The same is true of the northern counties, and the coast counties could have a central meeting point at the bay. The State Board will be glad to take the initiative and aid in getting health officers together and organizing, provided there is any disposition on the part of those interested.

#### SMALLPOX.

In the February issue of the Bulletin we called particular attention to smallpox, and warned health officers to be on their guard against it. Despite that warning and the active work of many of the health officers the disease has spread until it is now reported from eighteen different cities and towns, in fourteen different counties, and there are no doubt cases in other counties that have not been reported. There is no disease more loathsome, few more fatal, and none more easily controlled.

The comparative lightness of the disease during the past few years has apparently made people disregard and cease to fear it. They have entirely forgotten the tens of thousands who formerly died from it and the thousands who were left badly deformed, nor do they recognize the fact that the same severity of type may prevail again at any time. Indeed, it is already becoming more severe, and the death-rate is not insignificant. Vaccination has practically stamped the disease out of Germany, and, if properly done, would here. Health officers should insist on this and urge vaccination upon all. The health regulations of the State require that every one who has been exposed shall be vaccinated or quarantined for twenty-one days. This must be enforced. The school authorities should do their duty and enforce the vaccination law, and then the school children at least would be safe. There are a few so-called physicians in the State who seem to have a constitutional inability to diagnose smallpox, or, as it sometimes seems, possessed of an evil spirit which prompts them to deny its existence when they know the fact. This is largely responsible for the spread, and has caused much sickness, a few deaths, and the expenditure of many thousands of dollars by the communities for quarantine pur-

poses and other means of suppressing the epidemic caused by their denial. This class of men should be so thoroughly ostracized that they will need find other occupation, for they bring disgrace upon the profession and suffering and death to their patients. We recognize the difficulty of diagnosis in some cases, and that an honest difference of opinion may exist; however, it is not to this to which we refer, but to the many known cases where the attending physician will admit to the consultant or health officer the existence of the disease when he is forced by the evidence of the case to do so, yet deny it to the family and minimize the danger.

Isolation of all cases must be carefully practiced. All bedding which can not be boiled must be destroyed. Rooms in which the patient is sick should be thoroughly screened, so that flies or other insects can not gain admittance or pass out, for they may be the means of communication. Patients are oftentimes let out before all sores are healed and scabs removed, thus practically wasting all the effort previously made to prevent the spread of the contagion. They should be kept in until entirely clean, and before they are allowed to go out, given an antiseptic bath.

Disinfection is an important step in the prevention of its spread, for the contagion will cling for a variable length of time to articles used about the patient. The following from Welch and Schamberg is to the point:

"All discharges, not excepting those from the nose and mouth, should be received into a vessel containing such disinfectant as chloride of lime, carbolic acid or bichlorate of mercury. Under no circumstances should the excreta be allowed to flow into the sewer or be cast away without first having undergone disinfection. In country districts where disinfection may not be readily obtained, the discharges should be buried deeply in the ground in a locality where there is no danger of contaminating the water supply. Every handkerchief, towel, and article of bedding and clothing used by the patient should be steeped for some time before leaving the room in a solution of two fluid ounces of chloride of zinc or four fluid ounces of carbolic acid to the gallon of water, and afterwards boiled by themselves for half an hour or longer in plain water; all small articles, such as bits of linen, sponge, absorbent cotton, and the like, should be burned immediately; all utensils used for eating and drinking should be purified by boiling water; and, in short, nothing should be allowed to leave the room without having first been subjected to some form of disinfection."

After death or recovery, the sick room should receive attention. Everything of no great value, and everything that can not be properly disinfected, like the mattress, should be burned. Objects that can be subjected to wet heat without injury, should be boiled for half an hour. The room and such articles as can not be boiled must be subjected to thorough disinfection. Carpets should be raised from the floor, so that the gas can get under them. Neither the formaldehyde gas nor that from burning sulphur penetrates very deeply into dry material, so before fumigating it is well to spray the room and furnishings to be disinfected with some disinfecting solution. The forty per cent solution of formalin, which is generally used for disinfecting, diluted one or two times with water, is excellent for this purpose. The

room must be carefully prepared by sealing all cracks and closing holes in the chimneys. If formalin is used, a pint to 1,000 cubic feet is not too much. If sulphur, five pounds to the same space, and in either case leave the room closed for eighteen hours.

Sunlight and pure air are always in order, both through the time of sickness and afterwards, and a plentiful supply should be furnished. They will kill the germs of disease; but the process is not rapid, and should be used to supplement the other, not to replace it.

If these suggestions are carried out, all cases promptly reported, complete isolation of the sick and attendants, vaccination of those exposed, thorough cleaning of the convalescent patient, destruction of all discharges, bits of food, clothes, etc., used about the patient, screening of the room, and disinfection of house and contents, the present epidemic can be quickly subdued.

#### TYPHOID IN ROCKLIN.

At the request of the Board of Health of Rocklin, the Secretary of the State Board of Health visited that place on June 1st, for the purpose of determining the cause of the typhoid fever epidemic which existed there, and if found, have it abated.

Rocklin is a small town of 1,000 inhabitants, the principal industrial industries being the railroad shops and granite quarries. The location is healthful and the water supply is from the mountains, the water being conducted in an open ditch to within about five miles of town, when it enters a closed pipe from a very small reservoir. Some of the railroad men bring water from the mountains on the engine for the use of their families.

The first case appeared in December, 1905, and was soon followed by another in the same family. The second case might easily have been of secondary infection. There were no further cases until April, 1906, when a number of cases occurred in rapid succession, until on June 1st there had been nineteen cases.

Loomis, a town of two or three hundred inhabitants, farther up the road and having the same water supply, had four cases of typhoid, which were no doubt traceable to the same cause, and are considered as part of the same epidemic.

The cases were all typhoid, and there is no dispute as to diagnosis. Two deaths occurred out of the twenty-three cases. The cases were scattered in all parts of the town, and in only three houses was there more than one case in a house. In one there were three, and in two houses two cases each, leaving fifteen different points of infection, and in no case were the houses in close proximity, making it probable that the disease spread from one to the other. There was no common supply of milk, many keeping their own cows, so that milk as a cause was quickly eliminated, as was the vegetable supply, for a like reason.

It seemed reasonable to suppose that the water supply was at fault, and this was strengthened by the fact that the families of railroad men who brought water from the mountains were not affected, and that Loomis, using the same water supply, had several cases of typhoid. It seemed so probable that the water was at fault that an investigation of it was undertaken by a member from the State and one from the local Board of Health. A sample from the reservoir had already been

sent to the State hygienic laboratory for analysis, but the report had not been received.

The reservoir was visited first. It was but a few yards across, and located close beside the wagon road and probably but one hundred or two hundred feet from the main line of railroad. It was entirely unprotected, even by a fence, which would keep boys or animals from bathing in it. This, of itself, might be the cause; but we determined to look further. The open ditch which brings the water to the reservoir runs through a farming district and is subject to the wash from many fields, orchards, and, no doubt, corrals. The capstone was reached, however, when at Penryn we found a China and Jap town situated in a small hollow, with gently sloping sides, but with quite a steep descent. The houses were built on either side and directly across the hollow which received all the drainage from them. Across the lower end of this hollow ran the water ditch into which discharged quite a stream of water, the drainage from the hollow.

It seemed useless to hunt further for a cause, for while other sources of pollution might be found, here was enough to condemn the supply. The result of the examination of the water at the laboratory, received soon after the inspection, confirmed our belief that the water was polluted, colon bacilli being plentifully found.

Owing to the reticent nature of the Orientals and their fear of being disturbed in their mode of life, it is very difficult to get from them any history of previous sickness. This makes it impossible to trace the disease to a former case, but as the Japanese are quite subject to typhoid, in this State, at least, it is more than probable that some one of them was sick with it in that camp, or came there while convalescing.

To summarize: (a) We have two adjoining towns, having the same water supply, afflicted with a sudden epidemic of typhoid, where one in fifty of the inhabitants was sick, and a death-rate of ten per cent.

- (b) But four of the cases could possibly have been secondary.
- (c) Milk and other food supplies, as a cause, were eliminated.
- (d) All the cases used the town water supply.
- (e) A bacteriological examination of the water showed colon bacilli, and plenty of pollution was found by examining the ditch.

There had been an attempt to keep the ditch free from pollution by building a flume over it for the drainage of the hollow to pass through. This, however, was ineffective, and the company was notified to at once take steps to conduct the water over the drainage. This they promptly did, and that source of danger has been shut out. The mud in the reservoir may be still infected, and when stirred up by any means may yet cause trouble.